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MULTI - ORGANIZATIONAL RESEARCH IN THE NAVY:

FUTURE DIRECTIONS

by

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## Multi-Organization Research in the Navy: Future Directions

### Introduction

Although the Navy has collected, and continues to collect, voluminous amounts of psychological and sociological data on its people, the vast majority of these data is oriented towards personnel selection (e.g. aptitude scores, fitness reports, demographic characteristics, etc.). It has only been fairly recently (within the last five years or so) that data at the organizational level have become available for systematic research. While operational data from individual command units have long been compiled as a matter of military routine, these data have not typically been analyzed to illuminate the organizational dynamics underlying behavior within the command. However in the past few years, the Navy has engaged in a number of research projects that have generated some significant albeit tentative results that contribute to our knowledge of organizations.

### Review of Organizational Research in the Navy

The Navy's Human Resource Management (HRM) Program is by far the largest single source of organizational data we have. Based upon the University of Michigan's Survey Guided development, this program has been designed to improve organizational effectiveness by stimulating individual commands to diagnose existing and potential problems and identify appropriate solutions. The primary purpose of the survey is to assess the quality of the organizational climate along a variety of dimensions, e. g.,



communication, motivation, satisfaction, etc. In addition there are numerous demographic data (e.g. rank, rating, race, etc.) that are collected which permit cross-sectional analyses across sample characteristics.

Since December of 1973, the HRM Survey Data Bank has accumulated more than 300,000 respondents representing over one thousand separate commands. The data bank is increased by 30 to 60 commands every month. As the program continues, the number of units who are resurveyed increases. Presently some 300 commands have been surveyed twice and 26 commands have been surveyed three times.

To date the great research potential of this massive data source has only been partially tapped. Initial studies have been typically correlational in nature. Besides examining the factor structures underlying the survey items, (Wilcove, 1976) we have also correlated various dimensions of organizational climate with other characteristics of the organization such as crew size, (Haga, 1976), retention (Crawford & Thomas, in preparation) non-judicial punishment rates, (Crawford & Thomas, 1976) and training performance (Mumford, 1976). More recently the Navy Personnel Research and Development Center has completed several exciting quasi-experimental studies which examined the impact of organizational interventions on operational indicators. (Thomas and Crawford, 1977). Although the conclusions drawn from these studies are still tentative, there are positive indications that organizational climate is significantly related to several measures of effectiveness. In addition we have begun to explore the effects



of moderating variables such as crew size, department size, and ship class.

Another large research project on Navy organizations has been conducted by Dr. Saul Sells (Sells, 1974) of Texas Christian University. Although independent of and smaller in scope than the HRM program, this project has addressed many variables that are common with HRM specifically around organizational climate. A related project run by Dr. Eric Gunderson of the Naval Health Research Center in San Diego, also examined environmental and individual variables such as crowding, noise, heat, and illness rates (Gunderson, 1974). These joint studies included over 7000 crew members and 33 Navy ships. Some units participated in a second round of data collection after several months to provide a longitudinal perspective on major variables.

What distinguishes these projects is the comprehensiveness of both the conceptual foundation and the methodological net used to gather data. Employing an ambitious social systems model of organizational functions (James and Jones, 1974), Sells, Gunderson and their associates have attempted to provide an integrated understanding of the relationships among environmental, organizational, and individual characteristics. Although these projects have been documented in numerous reports, ( cf. King, 1974) the research potential of these data is not yet exhausted.

A third large research effort has been carried out by faculty at the Naval Postgraduate School and M.I.T under the sponsorship of the Department of Defense. Focussing upon the utilization of physician extenders in the military health care system, this study

obtained data from 2500 medical personnel from all three services including physicians, nurses, corpsmen, and other types of providers. Responses from every major military medical installation in the United States provide a broad description of the general context in which medical personnel perform. Variables included not only climate dimensions such as satisfaction, communication, and motivation but also structural dimensions such as administrative control and medical autonomy. In addition indicators of medical technology measured task complexity associated with frequently performed functions (Giaque, Derr, Eoyang, and Harris, 1976).

Among the issues addressed by this project include the qualitative factors underlying organizational commitment, the functional differentiation across the spectrum of health care providers, and the relationship between organizational structure and career attitudes. Additional questions remain which may have wider relevance beyond only military health contexts.

While these studies are among the largest in scope, several other smaller research projects on Navy organizations have been sponsored by the Office of Naval Research. One concerns patterns of communication and their causal antecedents (Monge and Kirste, 1975); another effort has examined social networks and information accuracy in various groups. (Killworth and Bernard, 1975); a third project has focussed upon the effects of organizational structure and demographic characteristics on work. (ONR, 1976). Most of the research supported by ONR is basic research, as is consistent with their mission. Nevertheless there is growing appreciation among ONR research contractors for collecting data from Navy organizations and such research may have both scientific and managerial relevance.

Other agencies that are sponsoring studies and analyses that may contribute to organizational science perhaps indirectly include the Navy Personnel Research and Development Center, The Office of Equal Opportunity in the Department of Defense, The Office of Civilian Personnel, and the Bureau of Naval Personnel. Although many of these studies do not address Navy ships as specific units of analysis, they will provide relevant information about the people who constitute the ship board organizations. The better we understand the similarities and differences between Naval Personnel and civilians, the more confidently we will be able to extend the findings from our own research to other settings and populations.

#### Strengths and Limitations of Naval Research

Although the difficulties of designing and implementing meaningful studies of Naval organizations are often substantial, there are also clear sometimes unique benefits. For example, standardization of some structural variables (e.g. rank and pay) throughout the Navy permits some measure of control and comparability in analyses of variance. A second advantage is that large sample sizes can frequently be arranged to accomodate adequate sample variance and parametric statistical tests of significance. A third benefit to studying Naval organizations is that changes affecting the entire service are typically implemented over time, thus permitting the use of quasi-experimental designs or in some instances even natural experiments. Finally the Navy, unlike many

large institutions, is willing to devote substantial resources and energy to analyzing and understanding organizational dynamics. Consequently vast amounts of information already exist and remain to be studied by organizational scholars skilled in archival research.

However research in the Navy is not without its disadvantages as well. Foremost is that parts of the Navy are uniquely different in many respects (e.g. the submarine service) and thus the ability to generalize to other populations may be quite limited. Fortunately other parts of the Navy (e.g. hospitals) exhibit enough similarity to civilian organizations that comparability is not severely threatened. Of course the applicability of results from Naval Research to other populations ultimately depends upon the central variables of interest and the degree of commonality among units of analysis. For example all Navy ships at present are manned by male sailors and most probably function differently than work groups containing large numbers of women.

A second research limitation was recently imposed by federal legislation such as the Freedom of Information and Privacy Acts which restrict the collection and storage of personal information. To cite a case in point, our HRM survey data is structured so that no responses can be traced to a given individual in order to preserve confidentiality.

A third limitation is that it is now very difficult to obtain the necessary authorization to conduct extensive new surveys among Navy personnel. Because previous projects have on



occassion interfered with operational requirements, the Navy has imposed centralized control over any survey administered to the fleet.

Finally a fourth disadvantage which presents both conceptual and methodological difficulties is that personnel turnover is so rapid that longtitudinal analyses and follow-up studies may be quite problematic. Military organizations do not enjoy the same stability as civilian institutions and over the span of a few years the membership may change completely.

These shortcomings notwithstanding, carefully designed and well executed research designs on Naval organizations are likely to make significant contributions to our knowledge of organizational behavior in general.

#### Future Directions

Undoubtedly current prograss in organizational research will continue to exploit existing sources of data, even as new initiatives by ONR contractors and Navy analysts build even further the wealth of information available. While it may be tempting to extrapolate present indications into future trends, more insight may be gained by also contemplating changes in the trend.

One need which is immediately obvious is the integration of existing knowledge. Although there is a large variety of organizational characteristics that have been studied, there has been a serious deficiency in the identification and clarification of the relationships among these numerous variables. Clearly some study results are mutually supportive while others are contradictory. It is important to illuminate those findings that are corroborated

by independent tests and reconcile those findings that are inconsistent. A careful review of all empirical studies on Naval organizations would prove invaluable if it provided a systematic integration of the multiple attributes of organizations, if it delineated the relationships between individual characteristics and organizational functions, or if it differentiated the situational contingencies which determine variety in organizational behavior. It would seem that the principles of differentiation and integration (Lawrence and Lorsch, 1967) are as important to the development of the science of organizations as well as to their management.

A second direction consists of exploration of new and promising territory. In particular variables that have been neglected in military research include power, centralization, and culture. Research methods that have been under-utilized include naturalistic observation, unobtrusive methods, and reforms as experiments. Unexplored problems that have substantial interest include rapidly shifting sex ratios in masculine societies, institutional conflict resolution, and cultural assimilation. A specific example of fertile ground to be explored is the impact of technological changes. Major progress in this direction would require not only new conceptualizations of technology as an organizational variable but also innovative methods of measuring and analyzing it. There is no question that many of the Navy's problems now and in the future are rooted in ignorance of the organizational implications of technical change.

A third possibility for Naval research on organizations is that there may be spontaneous or serendipitous discoveries that may challenge conventional research paradigms. Although the vast amount of existing organizational literature is based upon social system models of various kinds, it is not inconceivable that alternative perspectives such as a dialectical view (Benson, 1977) or a garbage can model (Cohen, and March, 1975) may be more meaningful in explaining the dynamics and evolutions of large complex institutions.

Finally one thrust which may be inescapable is that organizational research in the context of the military will become more supportive of the information needs of policy makers in government. However much this pressure may compromise the scientific rigor or the cautious interpretation of military research, the demands of the Pentagon, the White House, and the Congress for definite answers to complex perhaps enigmatic questions may be irresistible. Unless our research contributes at least in some small measure to reducing the uncertainty in promoting the cost-effectiveness of Naval forces, it will become increasingly difficult to obtain the necessary resources and sponsorship to carry out any organizational research.

Examples of research topics that are likely to have strong governmental as well as academic interest cover a wide range.

They include:

- Measurement and description of personnel readiness
- Organizational impacts of collective bargaining
- Physical and environmental influences on retention and family stability



- Consequences of alternative man-equipment system designs
- Performance contingent incentive systems
- Dynamic job designs
- Factors underlying resistance to change
- Characteristics of effective change agents

While these hardly exhaust the possibilities for meaningful research in the Navy, they do illustrate the kinds of areas that are likely to be well received.

In conclusion, the outlook for the future of multi-organization research in the Navy is optimistic although cautious. As long as there is adequate recognition of the bureaucratic environment surrounding such research, there may be a variety of bright opportunities for major contributions to our knowledge of organizations.

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